



The inefficiency of publicly funded research

Public funding agencies, such as research councils, national science foundations etc., increasingly operate by issuing “calls for proposals”—announcements delineating a particular area of research that the agency desires to support. Unfortunately, these are usually very vaguely formulated. For example, the UK Biotechnology and Biological Sciences Research Council (BBSRC) has recently issued a call entitled “Enhancing photosynthesis to achieve a step change in productivity”. There are probably dozens, if not hundreds of UK researchers who would be able to formulate a research proposal to achieve this end. The BBSRC presumably hopes to receive a comparable number of grant applications. However, only £2 million pounds is available to support this research, which means that only two or three typical projects can be funded. The disparity between the applications and available funds means that there will be an enormous waste: the effort spent in preparing all the proposals that will end up being unsuccessful and the effort spent in evaluating all the proposals in order to select a few for funding are direct sources of waste, but the indirectly deleterious effect on morale within the research community through the rejection of laboriously compiled research plans and the likelihood that some of the “successful” (i.e., funded) projects will end up not yielding results of any value must also be included.

A similar example is a call from the UK Engineering and Physical Sciences Research Council (EPSRC) for networks “to tackle significant research challenges in chemical biology”. This is even vaguer than enhancing photosynthesis, with a corresponding likelihood of an even larger number of applications, yet the amount available is smaller (only £800,000). It seems that the thinking behind these calls is similar to that of many human resources departments, which formulate advertisements for job vacancies so as to attract as many applicants as possible, thereby ensuring that they have plenty of work to do in selecting one candidate, by which means they seemingly justify their existence. The absurdity of this remarkably common procedure has been pointed out by Parkinson [1], who noted that the perfect advertisement would attract only one reply and that from the right man.

Currently, the European Union appears to be more sensible regarding its approach to getting research done. Thus we have, from the Joint Research Centre, a call for

a “Study on methodological aspects regarding limit values for pollutants”, which “shall provide scientific analysis of how limit values for pollutants may be developed as part of end-of-waste criteria for aggregates in accordance with Article 6 of the Waste Framework Directive”. €80,000 is available for this work, which will very likely attract a single applicant. The Directorate-General for Communication is offering €150,000 for a study to “determine the value of the European Parliament’s art collection in financial and artistic terms”. The Directorate-General for the Internal Market and Services is offering €302,500 for a study “to develop a methodology for identifying consumer needs in relation to the universal postal service”. The Directorate-General for Education and Culture is offering €150,000 for a study to “assess the impact of the national teams of Bologna experts on the implementation of the Bologna process, to provide a cost/benefit analysis of the experts exercise, and to provide recommendations regarding the future of this exercise”. The Directorate-General for the Environment requests a study to “identify the driving forces, pressures and impacts on ecosystems, societies and the economy, identify and assess the adequacy of existing measures to prevent, manage or mitigate water scarcity and drought, identify gaps and suggest new measures, as well as carrying out an assessment of their environmental, economic and social impacts and feasibility”. This ambitiously conceived programme of work will be awarded funding of €250,000.

A criticism of these carefully tailored calls has been that they have sometimes resulted from intensive lobbying by a group wishing to carry out precisely the study specified. This seems to be a lesser evil than encouraging many scientists to bid for a very limited amount of funding. The lobbying group demonstrates high motivation and their technical ability to carry out the work they are bidding for will presumably be objectively assessed before any contract is awarded. Therefore, although in general lobbying is to be deplored, the practice of carefully specifying the desired terms of reference is to be encouraged.

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Reference

1. Parkinson, C.N. *Parkinson’s Law, or the Pursuit of Progress*, pp. 28 ff. Harmondsworth: Penguin (1965).